



IN THE CLAIMS.

Please amend the claims as follows.

1. **(Previously Presented)** A water electrolysis system comprising:

a water electrolysis means including a pair of catalyst layers and an electrolyte membrane sandwiched by both of the catalyst layers, for electrolyzing pure water supplied to said catalyst layers, and for generating hydrogen from one catalyst layer and a gas/liquid mixture of oxygen and pure water from the other catalyst layer;

a gas/liquid separating means for separating pure water from the gas/liquid mixture of oxygen and pure water both brought out from said water electrolysis means; and

a backflow means for making the pure water, separated by said gas/liquid separating means, flow back to said water electrolysis means;

wherein said gas/liquid separating means is directly connected to a discharge opening through which the gas/liquid mixture of oxygen and pure water is brought out from said water electrolysis means without any intermediate piping;

wherein said gas/liquid separating means comprises an intake opening for mint pure water to be supplied to said water electrolysis means after merging with recovered pure water within said gas/liquid separating means, and

wherein said gas/liquid mixture directly flows into said gas/liquid separating means through said discharge opening.

2. **(Previously Presented)** The water electrolysis system according to claim 1, further comprising a purifying means for purifying with the aid of ion exchange resin the pure water made to flow back by said backflow means, wherein pure water

having been purified by said purifying means is made to flow back to said water electrolysis means.

3. **(Previously Presented)** The water electrolysis system according to claim 2, wherein said purifying means shares a common wall with said water electrolysis means.

Claim 4 **(Canceled)**.

5. **(Previously Presented)** The water electrolysis system according to claim 1, wherein said gas/liquid separating means comprises a filter means for separating oxygen and pure water from each other.

6. **(New)** A water electrolysis system comprising:

a water electrolysis means including a pair of catalyst layers and an electrolyte membrane sandwiched by both of the catalyst layers, for electrolyzing pure water supplied to said catalyst layers, and for generating hydrogen from one catalyst layer and a gas/liquid mixture of oxygen and pure water from the other catalyst layer;

a gas/liquid separating means for separating pure water from the gas/liquid mixture of oxygen and pure water both brought out from said water electrolysis means;

a backflow means for making the pure water, separated by said gas/liquid separating means, flow back to said water electrolysis means; and

purifying means for purifying the pure water made to flow back by said backflow means,

wherein said purifying means is only in communication with said water electrolysis means and said gas/liquid separating means;

wherein said gas/liquid separating means is directly connected to a discharge opening through which the gas/liquid mixture of oxygen and pure water is brought out from said water electrolysis means without any intermediate piping; and

wherein said gas/liquid mixture directly flows into said gas/liquid separating means through said discharge opening.

7. **(New)** The water electrolysis system according to claim 6, wherein the purifying means purifies the pure water with the aid of ion exchange resin and, wherein pure water having been purified by said purifying means is made to flow back to said water electrolysis means.

8. **(New)** The water electrolysis system according to claim 6, wherein said purifying means shares a common wall with said water electrolysis means.

9. **(New)** The water electrolysis system according to claim 6, wherein said gas/liquid separating means comprises an intake opening for mint pure water to be supplied to said water electrolysis means.

10. **(New)** The water electrolysis system according to claim 6, wherein said gas/liquid separating means comprises a filter means for separating oxygen and pure water from each other.